

UTAH OSHA SAFETY LINE

N E W S L E T T E R

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ELECTRICAL SAFETY IN CONSTRUCTION

Electrocutions are one of the greatest hazards on construction sites. Nearly 5% of all deaths in construction are the result of electrocutions. As an employer it is your duty to ensure that your employees are provided a safe and healthful workplace free from recognized hazards. This article will provide you some tools to help you identify electrical hazards on your job site.

With the wide use of portable tools on construction sites, the use of flexible cords often becomes necessary. Hazards are created when cords, cord connectors, receptacles, and cord- and plug-connected equipment are improperly used and maintained. Generally, flexible cords are more vulnerable to damage than is fixed wiring. Flexible cords must be connected to devices and to fittings so as to prevent tension at joints and terminal screws. Because a cord is exposed, flexible and unsecured joints and terminals become more vulnerable. Flexible cord conductors are finely stranded for flexibility, but the strands of one conductor may loosen from under terminal screws and touch another conductor, especially if the cord is subjected to stress or strain.

A flexible cord may be damaged by activities on the job, by door or window edges, by staples or fastenings, by abrasion from adjacent materials, or simply by aging. If the electrical conductors become exposed, there is a danger of shocks, burns, or fire. A frequent hazard on construction site is a cord assembly with improperly connected terminals.

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Also, when a cord connector is wet, hazardous leakage can occur to the equipment grounding conductor and to humans who pick up that connector if they also provide a path to ground. Such leakage is not limited to the face of the connector but also develops at any wet portion of it.

When the leakage current of tools is below 1 ampere, and the grounding conductor has a low resistance, no shock should be perceived. However, should the resistance of the equipment grounding conductor increase, the current through the body also will increase. Thus, if the resistance of the equipment grounding conductor is significantly greater than 1 ohm, tools with even small leakages become hazardous.

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The Occupational Safety and Health Administration's (OSHA) electrical standard for construction, title 29 Code of Federal Regulations Part 1926, Subpart K, contains the requirements for ground fault circuit interrupters (GFCIs) and for assured equipment grounding conductor programs. These requirements will help reduce the number of injuries and accidents from electrical hazards. Work disruptions should be minor, and the necessary inspections and maintenance should require little time.

GFCIs

A GFCI is a fast-acting circuit breaker that senses small imbalances in the circuit caused by current leakage to ground and, in a fraction of a second, shuts off the



electricity. The GFCI continually matches the amount of current going to an electrical device against the amount of current returning from the device along the electrical path. Whenever the amount “going” differs from the amount “returning” by approximately 5 milliamps, the GFCI interrupts the electric power within as little as 1/40 of a second.

The GFCI, however, does not protect from line-to-line contact hazards—such as a worker holding two “hot” wires or a hot and a neutral wire in each hand. It protects against the most common form of electrical shock hazard—the ground fault, and protects against fires, overheating, and destruction of insulation on wiring.

GFCIs can be used successfully to reduce electrical hazards on construction sites. Tripping of GFCIs—interrupting current flow—is sometimes caused by wet connectors and tools. It is good practice to limit exposure of connectors and tools to excessive moisture by using watertight or sealable connectors.

Providing more GFCIs or shorter circuits can prevent tripping caused by the cumulative leakage from several tools or by leakages from extremely long circuits.

Assured Equipment Grounding Conductor Program

The assured equipment grounding conductor program covers all cord sets, receptacles which are not a part of the permanent wiring of the building or structure, and equipment connected by cord and plug which are available for use or used by employees. The requirements which the program must meet are stated in 29 CFR 1926.404(b)(1)(iii), but employers may provide additional tests or procedures. OSHA requires that a written description of the employer's assured



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equipment grounding conductor program, including the specific procedures adopted, be kept at the jobsite. This program should outline the employer's specific procedures for the required equipment inspections, tests, and test schedule. The required tests must be recorded, and the record maintained until replaced by a more current record. The written program description and the recorded tests must be made available, at the jobsite, to OSHA and to any affected employee upon request. The employer is required to designate one or more competent persons to implement the program.

Electrical equipment noted in the assured equipment grounding conductor program must be visually inspected for damage or defects before each day's use. Any damaged or defective equipment must not be used by the employee until repaired.

Two tests are required by OSHA. One is a continuity test to ensure that the equipment grounding conductor is electrically continuous. It must be performed on all cord sets, receptacles which are not part of the permanent wiring of the building or structure, and on cord- and plug connected equipment which is required to be grounded. This test may be performed using a simple continuity tester, such as a lamp and battery, a bell and battery, an ohmmeter, or a receptacle tester.

The other test must be performed on receptacles and plugs to ensure that the equipment grounding conductor is connected to its proper terminal. This test can be performed with the same equipment used in the first test.

These tests are required before first use, after any repairs, after damage is suspected to have occurred, and at 3-month intervals. Cord sets and receptacles which are essentially fixed and not exposed to damage must be tested at regular intervals not to exceed 6 months. Any equipment which fails to pass the required tests shall not be made available or used by employees.

Need help with your Equipment Grounding Conductor Program?

The UTAH OSHA Consultation Program provides assistance to small employers in high hazard industries throughout the State of Utah. The Consultation Program can provide training for your employees, assistance with written programs, site visits to identify hazards, and Industrial hygiene assistance (noise measurements, air sampling and analysis) all at no charge to the employer.

For more information please contact the Utah OSHA Consultation Program at 801-530-6855

Guardian Fall Protection Products

Swivel Snaphook Inspection Notification



Attention: All Valued Customers and Distributors who have purchased Guardian Fall Protection (GFP) products featuring a specific SWIVEL SNAPHOOK shipped from GFP after August 26, 2011.

Background: GFP was made aware of a non-injury incident involving a GFP self-retracting lifeline (SRL) where a swivel snaphook experienced a failure. The nut that holds the swivel eye to the hook body backed off the hook stem and came loose. The non-injury incident was discovered during initial inspection of the equipment performed by a user.

The potentially dangerous and faulty condition was caused when GFP's supplier of a particular swivel snaphook missed a swaging operation that encapsulates the swivel eye and prevents the threaded nut from backing off of the hook stem. This situation is restricted to a certain type of swivel snaphook supplied to GFP and is identified in this notice. Upon discovery, both GFP and the supplier have increased inspection processes to ensure this cannot occur in the future. Supplier and GFP inventories have been inspected for this condition upon discovery. No defective units were found in inventory. Any products you receive after June 26th have been 100% inspected specifically for this condition and any other defect.

Notification Action Required: We believe the number of possible defective swivel snaphooks is very minimal. We are asking you to please inspect your inventory of GFP parts listed below. Also, we ask you to directly communicate this INSPECTION NOTIFICATION to your customers who have purchased Guardian SRLs since August 26, 2011. If customers have products with defective hooks, GFP will replace them and cover the freight costs. GFP's network of territory managers and representatives can assist you at your request.

THIS INSPECTION NOTIFICATION APPLIES TO: This notice applies only to the following parts with a manufacture date between August 26, 2011 and June 26, 2012: MK EDGE Series, YELLOW JACKET Series, DAYTONA Series, 3-WAY RESCUE RETRIEVAL Series, AARDVARK Series, EDGE Series 20ft. - 30ft. lengths (this notice DOES NOT apply to the 11ft. web EDGE style SRLs), ROPE LIFELINE PART #01131 6 dual leg shock rope lanyard with polyplus rope with aluminum rebar hooks and high strength swivel snaphook, and CUSTOM PARTS manufactured after August 26, 2011 with swivel snaphooks.

Follow the instructions below to determine if your product contains the specific swivel snaphook that is part of this inspection notice. Note: Not all GFP products with swivel snaphooks feature the hook identified in this notice. This notice applies to a specific Swivel Snaphook manufactured by a particular snaphook supplier featuring this design.

NOTE: HOOKS MAY BE GOLD OR SILVER PLATED.

Swivel Snaphook Style:

1. Specific to the models shown with the Guardian 'G' Gear Marking Shown: AND
2. Swivel Snaphook model 01825-HS or Swivel Indicating Snaphook model 01826-HS AND
3. Featuring the nut and swage design for swivel attachment

Pictures of hooks with this identification is found on the next page.



Marked with part # 01825-HS or 01826-HS on the hook body



Full photo of the potentially defective swivel snaphook.



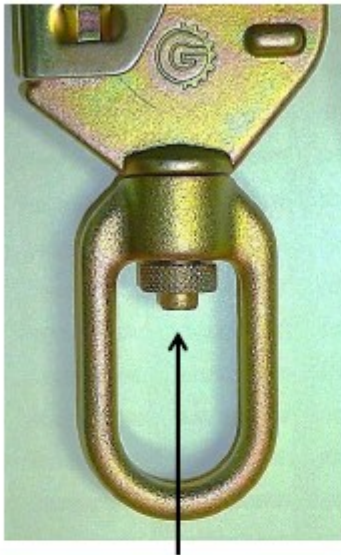
Marked with Guardian logo at hook base

Marked with part # 01825-HS or 01826-HS on the hook body

If you identify that your product contains the hook identified in this notice, please follow the "How to inspect for the faulty swage condition" section on the next page.

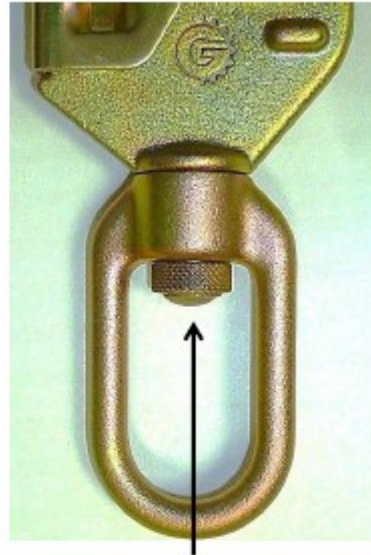


DEFECTIVE CONDITION

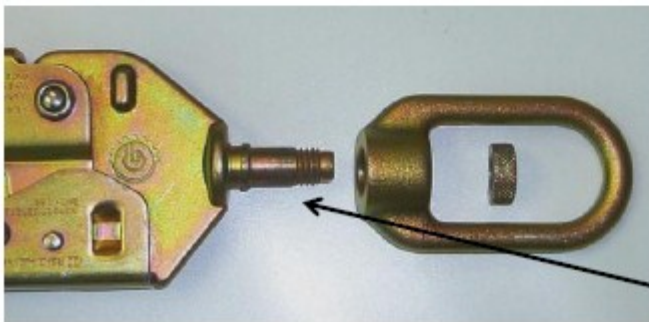


BAD HOOK. STEM PROTRUDES STRAIGHT THROUGH THE NUT. STEM HAS NO MUSHROOM SHAPE FLARED OVER THE NUT. NUT CAN BACK OFF THREADED STEM.

NORMAL CONDITION



NORMAL SWAGED HOOK. GOOD HOOK. STEM FLATTENED IN A MUSHROOM SHAPE. ANY SORT OF SWAGE MEANS HOOK IS GOOD. NUT CANNOT BACK OFF STEM.



BAD HOOK. STEM OF HOOK BODY WAS NOT SWAGED OVER NUT. THREADED NUT IS CAPABLE OF SPINNING OFF THE STEM.

What to do if you identified that your product has a defective hook:

Remove the product from service immediately.

Contact Customer Service at GFP (1.800.466.6385) to be assigned a unique RQC - return number. Guardian will provide shipping instructions for returning products and coordinating replacements for units that have the defective swivel snaphooks. Guardian will replace the product and cover the freight costs.

If you have any questions relating to this inspection notice, contact Guardian's customer service department at 1.800.466.6385. GFP's network of territory managers and representatives can assist at your request.

Safety Compliance Corner

Frequently asked question regarding Scissor Lifts



Question: Is it permissible to allow workers to stand on scissor lift guardrails in order to perform work if they use a personal fall arrest system?

This commonly asked question was answered in a letter of Interpretation dated: October 23, 2002. The answer is: **NO!**

Section 1926.453(b)(2)(iv) states that "employees shall always stand firmly on the floor of the basket, and shall not sit or climb on the edge of the basket or use planks, ladders, or other devices for a work position."

The requirements of 29 CFR Part 1926 Subpart L (Scaffolds) applies to scissor lifts. There is no single provision in the scaffold standard that states that this practice is prohibited. However, as a practical matter, it is unlikely that all the requirements of the scaffold standard could be met while engaging in this practice.

Section 1926.451(a)(1) requires, in general, that each scaffold and scaffold component "be capable of supporting, without failure, its own weight and at least four times the maximum intended load applied or transmitted to it." Also, one of the requirements of §1926.451(a)(6) is that scaffolds be loaded in accordance with its design. Section 1926.451(f) prohibits a scaffold from being loaded in excess of the maximum intended loads or rated capacities.

To meet these requirements with employees standing on the guardrails, the scaffold would have to be designed so that the load imposed by employees climbing onto and standing on the guardrails (which include eccentric loads) would be within the capacity of the guardrail, all other scaffold components, and scaffold as a whole, with a safety factor of 4:1. Scaffold guardrails and associated components typically are not designed to handle such loads.

Secondly, if the employees were to stand on the guardrail, it would be considered a scaffold platform - the definition of a scaffold platform is "a work surface, elevated above lower levels...." The guardrail would then have to meet the requirements in §1926.451(b) (scaffold platform construction).

One of those requirements is §1926.451(b)(2), which states that, subject to some exceptions, scaffold platforms must be at least 18 inches wide. Under §1926.451(b)(2)(ii), narrower platforms are allowed only where the employer demonstrates that they cannot be at least 18 inches. Before an employer would be allowed to use a guardrail as a work platform, it would have to demonstrate that the width of the guardrail (the top rail's diameter) was the widest the platform could be. Since the guardrail would be on a scaffold, and the scaffold would be considerably wider than the top rail's diameter, the employer would not normally be able to make that showing.

Use of personal fall protection would not be a substitute for compliance with these scaffold requirements - these plus the fall protection requirements must be met. Note that §1926.502(d)(23) prohibits personal fall arrest systems to be attached to guardrails systems. Therefore, the system would have to be anchored to either the scissor lift or an adjacent structure.

For the complete letter of interpretation go to: http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=24574

OSHA Trade News Release

U.S. Department of Labor
OSHA, Office of Communications



August 17, 2012

Contact: Office of Communications

Phone: 202-693-1999

OSHA issues Direct Final Rule to apply worker safety and health requirements for cranes and derricks to demolition and underground construction

WASHINGTON – The Occupational Safety and Health Administration (OSHA) today issued a direct final rule and notice of proposed rulemaking that applies the requirements of the August 2010 cranes and derricks in construction standard to demolition work and underground construction. The application of this rule will protect workers from hazards associated with hoisting equipment used during construction activities.

The direct final rule will apply the same crane rules to underground construction and demolition that are already being used by other construction sectors, and will streamline OSHA's standards by eliminating the separate cranes and derricks standard currently used for underground and demolition work. The rulemaking also corrects several errors introduced in the 2010 rulemaking to make it easier for workers and employers to understand and implement these standards.

The direct final rule will become effective November 15, 2012, unless OSHA receives a significant adverse comment by September 17. If the agency receives significant adverse comments, the accompanying notice of proposed rulemaking will allow the agency to continue the notice-and-comment component of the rulemaking by withdrawing the direct final rule.

Individuals may submit comments electronically at <http://www.regulations.gov>, the Federal eRulemaking Portal. Submissions may also be sent via facsimile or mail. See the Federal Register notice for details. Comments must be submitted by September 17.

Under the Occupational Safety and Health Act of 1970, employers are responsible for providing safe and healthful workplaces for their employees. OSHA's role is to ensure these conditions for America's working men and women by setting and enforcing standards, and providing training, education and assistance. For more information, visit <http://www.osha.gov>.

U.S. Labor Department news releases are accessible on the Internet at www.dol.gov. The information in this release will be made available in alternative format upon request (large print, Braille, audiotope or disc) from the Central Office for Assistive Services and Technology. Please specify which news release when placing your request. Call 202-693-7828 or TTY 202-693-7755.